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EXAMINER

ARCOS, CAROLINE H

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/613,779	Applicant(s) MATHIAS ET AL.	
	Examiner CAROLINE ARCOS	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/29/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are pending for examination.

Drawings

2. The drawings were received on 12/29/2003 are replacement of the drawing submitted on 7/1/2003.
3. Figure 1 is objected to for minor informality because it should be “system operating system” instead of “system operations system”. Figure 3 is objected to because it should be designated by a legend such as --Prior Art—as stated by specification page 9, line 1 because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

4. The information disclosure statement filed 12/29/2003 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the

application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

5. In order for this information to be considered by the examiner, this information should be placed in 1449 form.

Specification

6. The abstract of the disclosure is objected to because it exceeded the 150 words limit for abstract. See 37 CFR 1.72(b) and MPEP § 608.01(b). Correction is required.

7. Applicant has failed to provide antecedent basis for claims 8-11 terminology "computer readable medium". Therefore, the given specification is objected under 37 CFR 1.75. <See MPEP 608.01(n)>.

8. The specification is objected to because doesn't comply with 37 CFR 1.77(b) and omission of labeling background of the invention section. Examiner considered specification from page 1 line 6 to page 4, lines 4 is applicant admitted prior art.

9. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 4- 7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

12. Claims 4-7 are rejected under 35 U.S.C 101 because the claimed invention is directed to system claims, but appearing to be comprised of software alone without claiming the associate computer hardware required for execution. For example, claim 4 recite a guest operating system dispatching a plurality of applications, means for determining information and means for reporting an amount of usage of each of said applications to a billing function, which are all software modules/functions. Software alone is directed to a non-statutory subject matter. Claims 5-7 are rejected for similar reasons as discussed for their respective parent claim, as they fail to present any limitations that resolve the deficiencies of the claim from which they depend.

Claim Rejections - 35 USC § 112

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following terms lacks antecedent basis:

i. The steps –claim 1.

ii. The step – claim 2.

iii. The total usage – claim 3, claim 7, claim 11 and claim 16.

- iv. Said total usage – claim 19.
- b. The claim language in the following claims is not clearly understood:
 - v. As per claim 1, line 1, it is not clearly understood of what is “LPAR” abbreviated? Line 3, it is unclear where does “a guest operating system” reside? (i.e. it resides on the LPAR or somewhere else). It is unclear whether there is a host operating system, since there is a guest operating and where does it reside? Line 7, it is unclear who is reporting an amount of usage of each of said applications to a billing function? Lines 7- 8, it is not clearly understood what is considered "a billing function"? and what does it consist of?
 - vi. As per claim 2, lines 1-2, it is not clearly understood whether “an amount of usage” is the same as “an amount of usage” referred to in claim 1?(i.e. if it is the same , it should be referred to as said amount of usage). It is unclear how the determination of an amount to of usage of each application based on OS determination? (i.e. does it simply reads what the OS recorded of each application usage?).
 - vii. As per claim 3, line 2, it is unclear what is considered “system data” and does application usage considered one of the system data?
 - viii. As per claim 4, line 1, it is not clearly understood of what is “LPAR” abbreviated? line 3, it is unclear whether there is a host operating system, since there is a guest operating and where does it reside? Line 8, it is not clearly understood what is considered "a billing function"? and what does it consist of?

ix. As per claim 6, lines 1-2, it is not clearly understood whether “an amount of usage” is the same as “an amount of usage” referred to in claim 4?(i.e. if it is the same , it should be referred to as said amount of usage). It is unclear how the determination of an amount to of usage of each application based on said information determined by the information determining means? (i.e. does it simply reads what the information determining means recorded of each application usage?).

x. As per claim 7, lines 2-3, it is unclear what is considered “system data” and does application usage considered one of the system data?

xi. As per claim 8, line 2, it is not clearly understood of what is “LPAR” abbreviated? Line 5, it is unclear whether there is a host operating system, since there is a guest operating and where does it reside?

xii. As per claim 10, lines 1-2, it is unclear what is the function of the fourth program instructions? It is unclear how the fourth program instructions determine an amount of usage of each of said application since it was already determined by the guest OS or other program? (does the fourth program instructions simply reads whatever usage the OS recorded?)

xiii. As per claim 11, , line 2, it is not clearly understood whether “an amount of usage” is the same as “an amount of usage” referred to in claim 8?(i.e. if it is the same , it should be referred to as said amount of usage).

xiv. As per claim 12, line 1, it is not clearly understood of what is “LPAR” abbreviated? Line 5, it is unclear where does “a guest operating system” reside?

(i.e. it resides on the LPAR or somewhere else). It is unclear whether there is a host operating system, since there is a guest operating and where does it reside?

xv. As per claim 14, line 3, what does “same” refer to? (i.e. same as what?).

xvi. As claim 16, line 2, it is unclear what is considered “system data” and does application usage considered one of the system data?

xvii. As per claim 19, line 1, it is not clearly understood of what is “LPAR” abbreviated? Line 5, it is unclear where does “a guest operating system” reside? (i.e. it resides on the LPAR or somewhere else). It is unclear whether there is a host operating system, since there is a guest operating and where does it reside? line 13, it is unclear what is considered “system data” and does application usage considered one of the system data?

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 4, 6, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heath et al (US 5,553,239), in view of applicant admitted prior art (AAPA).

17. As per claim 4, Heath teaches a system for determining an amount of usage of applications in said computer system and a bill for such usage, said system comprising:

an operating system (29, fig. 2);

said operating system dispatching a plurality of applications(25, 29 fig. 2; col.9, lines 24-30);

means for determining information indicative of an amount of usage of each of said applications(abs., lines 12-13; col. 7, lines 11-13);

means, based on said information, for reporting an amount of usage of each of said applications to a billing function (abs., lines 12-20; col. 7, lines 11-13; col. 9, lines 11-15).

18. Heath doesn't explicitly teach determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system.

19. However, applicant admitted prior art (AAPA) in the original filed specification teaches determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system (page 3, lines 21-25).

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath and (AAPA) because (AAPA) teaching of determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system would improve Heath system monitoring performance by dividing the system to in LPARs and record closely and accurately application usage in each partition.

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21. As per claim 6, Heath teaches means for determining an amount of usage of each of said applications based on said information determined by the information determining means within said LPAR, and wherein the reporting means reports said amount of usage of each of said applications determined by the step of determining said amount of usage of said applications (abs., lines 12-20; col. 7, lines 11-13; col. 9, lines 11-15).

22. As per claim 8, Heath teaches a computer program product for determining an amount of usage of applications in a computer system and a bill for such usage, said computer program product comprising:

a computer readable medium;

first program instructions of an operating system to dispatch a plurality of applications (25, 29 fig. 2);

second program instructions of said operating system or other program to determine information indicative of an amount of usage of each of said applications (abs., lines 12-13; col. 7, lines 11-13);

based on said information, third program instructions to report an amount of usage of each of said applications to a billing function (abs., lines 12-20; col. 7, lines 11-13; col. 9, lines 11-15).

wherein said first, second and third program instructions are recorded on said medium (col. 5, lines 51-53).

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23. Heath doesn't explicitly teach determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system.

24. However, applicant admitted prior art (AAPA) in the original filed specification teaches determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system (page 3, lines 21-25)

25. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath and (AAPA) because (AAPA) teaching of determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system would improve Heath system monitoring performance by dividing the system to in LPARs and record closely and accurately application usage in each partition.

26. As per claim 10, AAPA teaches fourth program instructions to determine an amount of usage of each of said applications based on said information determined by said guest operating system or said other program executing in said LPAR (pg. 3, lines 20-25).

27. AAPA doesn't explicitly teach that said fourth program instructions are recorded on said medium. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store program instruction on some type of storage medium for facilitating usage of instruction.

28. Claims 1- 3, 5,7, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heath et al (US 5,553,239), in view of applicant admitted prior art (AAPA) and further in view of Smith et al. (“Application service provider business model implementation on the iseries server”, IBM redbooks, 2001, pages 1-259).

29. As per claim 1, Heath teaches the invention substantially as claimed including a method for determining an amount of usage of applications in a computer system and a bill for such usage, said method comprising the steps of:

executing an operating system (29, fig. 2);

said operating system dispatching a plurality of applications (25, 29 fig. 2; col.9, lines 24-30);

said operating system or other program executing determining information indicative of an amount of usage of each of said applications (abs., lines 12-13; col. 7, lines 11-13); and

based on said information, reporting an amount of usage of each of said applications to a billing function(abs., lines 12-13).

30. Heath doesn't explicitly teach determining an amount of usage of applications in an LPAR, the operating system executing in said LPAR is a guest operating system and that said billing function determining a bill for each of said applications based on said amount of usage of each of said applications.

31. However, applicant admitted prior art (AAPA) in the original filed specification teaches determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system (page 3, lines 21-25).

32. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath and (AAPA) because (AAPA) teaching of determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system would improve Heath system monitoring performance by dividing the system to in LPARs and record closely and accurately application usage in each partition.

33. The combined teaching of Heath and AAPA doesn't explicitly teach said billing function determining a bill for each of said applications based on said amount of usage of each of said applications.

34. However, Smith teaches said billing function determining a bill for each of said applications based on said amount of usage of each of said applications (Pg. 26, lines 12-13; pg. 26, lines 20-23; pg. 27, lines 20-30; table 16).

35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath, AAPA and Smith because Smith teaching of said billing function would improve system sophistication schemes by monitoring the exact usage of each application

is metered and billed to the user.

36. As per claim 2, Heath teaches the step of determining an amount of usage of each of said applications based on said information determined by said guest operating system or said other program executing in said LPAR, and the reporting step reports said amount of usage of each of said applications determined by the step of determining said amount of usage of said applications (abs., lines 12-20; col. 7, lines 11-13; col. 9, lines 11-15).

37. As per claim 3, the combined teaching of Heath and (AAPA) doesn't explicitly teach that the steps of: determining an amount of usage of said LPAR based on system data, without using application usage information determined by said guest operating system or said other program; determining the total usage of all of said applications in said LPAR based on said information determined by said guest operating system or said other program; and comparing said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to audit said amount of usage of said applications in said LPAR or a charge based on said amount of usage of said applications.

38. However, Smith teaching determining an amount of usage of said LPAR based on system data, without using application usage information determined by said guest operating system or said other program (pg. 27, lines 20-25).

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39. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath, AAPA and Smith because Smith's teaching of determining an amount of usage of said LPAR based on system data, without using application usage information determined by said guest operating system or said other program would improve system performance and accuracy by monitoring LPAR usage through system data to have error free billing by having a second billing variable to compare it with to make sure that it is accurate.

40. The combined teaching of Heath, AAPA and Smith doesn't explicitly teach determining the total usage of all of said applications in said LPAR based on said information determined by said guest operating system or said other program; and comparing said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to audit said amount of usage of said applications in said LPAR or a charge based on said amount of usage of said applications.

41. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude that by summing each application usage, the total usage of all of said applications in said LPAR is obtained and it would have been obvious to compare said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to charge based on said amount of usage of said applications which would improve system efficiency and accuracy by validating the accuracy of the measured amount of usage of all application against another metering maintained by the system to verify the accuracy of the

calculated usage before initiating the billing.

42. As per claim 5, Heath does explicitly teach said billing function, and wherein said billing function determines a bill for each of said applications based on said amount of usage of each of said applications(abstract, lines 12-20; col. 7, lines 11-13; col. 9, lines 11-15).

43. However, Smith teaches said billing function determining a bill for each of said applications based on said amount of usage of each of said applications (Pg. 26, lines 12-13; pg. 26, lines 20-23; pg. 27, lines 20-30; table 16).

44. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath, AAPA and Smith because Smith teaching of said billing function would improve system sophistication schemes by monitoring the exact usage of each application is metered and billed to the user.

45. As per claim 7, the combined teaching of Heath and (AAPA) doesn't explicitly teach means for determining an amount of usage of said LPAR based on system data, without using application usage information determined by said guest operating system or said other program; means for determining the total usage of all of said applications in said LPAR based on said information determined by said information determining means; and means for comparing said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to audit said amount of usage of said applications in said LPAR or a charge based on said

amount of usage of said applications.

46. However, Smith teaching means for determining an amount of usage of said LPAR based on system data, without using application usage information determined by said guest operating system or said other program (pg. 27, lines 20-25).

47. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath, AAPA and Smith because Smith's teaching of means for determining an amount of usage of said LPAR based on system data, without using application usage information determined by said guest operating system or said other program would improve system performance and accuracy by monitoring LPAR usage through system data to have error free billing by having a second billing variable to compare it with to make sure that it is accurate.

48. The combined teaching of Heath, AAPA and Smith doesn't explicitly teach means for determining the total usage of all of said applications in said LPAR based on said information determined by said guest operating system or said other program; and comparing said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to audit said amount of usage of said applications in said LPAR or a charge based on said amount of usage of said applications.

49. However, It would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude that by summing each application usage, the total usage of all of said applications in said LPAR is obtained and it would have been obvious to compare said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to charge based on said amount of usage of said applications which would improve system efficiency and accuracy by validating the accuracy of the measured amount of usage of all application against another metering maintained by the system to verify the accuracy of the calculated usage before initiating the billing.

50. As per claim 9, Heath doesn't explicitly teaches fourth program instructions within said billing function to determine a bill for each of said applications based on said amount of usage of each of said applications; and wherein said fourth program instructions are recorded on said medium (abs., lines 12-20; col. 5, lines 51-53; col. 7, lines 11-13; col. 9, lines 11-15). \

51. However, fourth program instructions within said billing function to determine a bill for each of said applications based on said amount of usage of each of said applications (Pg. 26, lines 12-13; pg. 26, lines 20-23; pg. 27, lines 20-30; table 16).

52. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath, AAPA and Smith because Smith teaching of said billing function would improve system sophistication schemes by monitoring the exact usage of each application is metered and billed to the user.

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53. The combine teaching of Heath, AAPA and Smith doesn't explicitly teach that said fourth program instructions are recorded on said medium. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store program instruction on some type of storage medium for facilitating usage of instruction.

54. As per claim 11, The combined teaching of Heath and (AAPA) doesn't explicitly teach fourth program instructions to determine an amount of usage of said LPAR based on system data, without using application usage information determined by said guest operating system or said other program;

fifth program instructions to determine the total usage of all of said applications in said LPAR based on said information determined by said guest operating system or said other program; and

sixth program instructions to compare said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to audit said amount of usage of said applications in said LPAR or a charge based on said amount of usage of said applications; and wherein said fourth, fifth and sixth program instructions are recorded on said medium.

55. However, Smith teaches fourth program instructions to determine an amount of usage of said LPAR based on system data, without using application usage information determined by said guest operating system or said other program (pg. 27, lines 20-25).

56. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath, AAPA and Smith because Smith's teaching of determining an amount of usage of said LPAR based on system data, without using application usage information determined by said guest operating system or said other program would improve system performance and accuracy by monitoring LPAR usage through system data to have error free billing by having a second billing variable to compare it with to make sure that it is accurate.

57. The combined teaching of Heath, AAPA and Smith doesn't explicitly teach fifth program instructions to determine the total usage of all of said applications in said LPAR based on said information determined by said guest operating system or said other program; and
sixth program instructions to compare said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to audit said amount of usage of said applications in said LPAR or a charge based on said amount of usage of said applications; and wherein said fourth, fifth and sixth program instructions are recorded on said medium.

58. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude that by summing each application usage, the total usage of all of said applications in said LPAR is obtained and it would have been obvious to compare said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to charge based on said amount of usage of said applications which would improve system efficiency and accuracy by validating the accuracy of the measured amount of usage of all

application against another metering maintained by the system to verify the accuracy of the calculated usage before initiating the billing.

59. Claim 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heath et al (US 5,553,239), in view of applicant admitted prior art and further in view of Smith et al. (“Application service provider business model implementation on the iseries server”, IBM redbooks, 2001, pages 1-259) and in view of Vessey et al. (US 2003/003718 A1).

60. As per claim 12, Heath teaches a method for determining an amount of usage of applications in a computer system and a bill for such usage, said method comprising the steps of:
executing an operating system (29, fig.2, col. 9, lines 25-33);
said operating system dispatching a plurality of applications, (25, 29 , fig. 2), determining information indicative of an amount of usage of each of said applications(abs., lines 12-13; col. 7, lines 11-13);

61. Heath doesn't explicitly teach said computer system including storage private to said LPAR, storage private to said system and system functions, and storage shared by said LPAR and said system functions, determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system.

62. However, Vessey teaches storage private to said LPAR, storage private to said system and system functions, and storage shared by said LPAR and said system functions (2218n,

2216a, 160, fig. 22; par. [0278], lines 1-11).

63. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath and Vessey because Vessey teaching of different type of storage private and shared would improve the system reliability by providing privilege access to those storage area thus preventing LPAR from accessing or altering system data.

64. The combine teaching of Heath and Vessey doesn't explicitly teach that determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system.

65. However, applicant admitted prior art (AAPA) in the original filed specification teaches determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system (page 3, lines 21-25)

66. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath, Vessey and (AAPA) because (AAPA) teaching of determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system would improve Heath system monitoring performance by dividing the system to in LPARs and record closely and accurately application usage in each partition.

67. The combined teaching doesn't explicitly teach writing said information to said shared storage, one of said system functions reading said information from said shared storage and reporting information indicative of an amount of usage of each of said applications to a billing function; and said billing function determining a bill for each of said applications based on the information obtained from said one system function.

68. However, Smith teaches writing said information to said shared storage (pg. 182, lines 30-32), one of said system functions reading said information from said shared storage and reporting information indicative of an amount of usage of each of said applications to a billing function (pg. 182, lines 32-34); and said billing function determining a bill for each of said applications based on the information obtained from said one system function (pg. 182, lines 10-13; pg. 182, lines 35-39) .

69. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath, Vessey, AAPA and Smith because Smith teaching of writing usage information to shared storage and reporting usage to a billing function would improve system accuracy and efficiency since the billing is more accurate since application usage information is pulled directly from the private storage of the LPAR to the shared storage which prevent any alteration to the information.

70. As per claim 13, AAPA teaches said guest operating system determines the amount of usage of each of said applications (pg. 3, lines 18-23). The combine teaching of Heath, Vessey,

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AAPA doesn't explicitly teach reports same to said shared storage. However, Smith teaches reports same to said shared storage (pg. 182, lines 32-34).

71. As per claim 14, AAPA teaches said guest operating system calculates the amount of usage of each of said applications (pg. 3, lines 18-23). AAPA doesn't explicitly teach calculates the amount of usage of each of said applications using storage private to said LPAR, and then reports same to said shared storage.

72. However, Smith teaches reports same to said shared storage (pg. 182, lines 32-34).

73. The combine teaching of Heath, Vessey, AAPA and Smith doesn't explicitly teach that calculates the amount of usage of each of said applications using storage private to said LPAR. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude calculates the amount of usage of each of said applications using storage private to said LPAR which would improve system accuracy and billing efficiency by using the usage information that is stored locally to the LPAR, The measured usage information is more accurate.

74. As per claim 15, Smith teaches said one system function processes said information obtained from said shared storage into a different form, and then reports said information in said different form to said billing function (pg. 182, lines 10-13; pg. 182, lines 35-39) .

75. As per claim 16, Smith teaches another of said system functions determining an amount of usage of said LPAR based on system data, without using application usage information generated by said guest operating system (pg. 27, lines 20-25).

76. The combined teaching of Heath, Vessey, AAPA and smith doesn't explicitly teach determining the total usage of all of said applications in said LPAR based on said information from said shared storage; and comparing said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to audit said amount of usage of said applications in said LPAR or a charge based on said amount of usage of said applications.

77. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude that by summing each application usage, the total usage of all of said applications in said LPAR based on said information from said shared storage is obtained and it would have been obvious to compare said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to charge based on said amount of usage of said applications which would improve system efficiency and accuracy by validating the accuracy of the measured amount of usage of all application against another metering maintained by the system to verify the accuracy of the calculated usage before initiating the billing.

78. As per claim 17, the combined teaching of Heath, Vessey, AAPA and Smith doesn't explicitly teach the step of determining said amount of usage of said LPAR based on said system

data is performed by checking usage bits of processors which execute said LPAR.

79. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude from Smith teaching of calculating hardware resource usage per application is done by checking usage bits of processors which execute said LPAR which would improve system accuracy of resource accounting used by all applications of said LPAR.

80. As per claim 18, Smith teaches said bill is based on a peak usage (pg. 27, line 29).

81. As per claim 19, Heath teaches a method for determining an amount of usage of applications in a computer system and auditing such usage, said method comprising the steps of:
executing an operating system(29, fig.2, col. 9, lines 25-33);
said guest operating system dispatching a plurality of application(25, 29 , fig. 2),
determining information indicative of an amount of usage of each of said applications(abs., lines 12-13; col. 7, lines 11-13).

82. Heath doesn't explicitly teach said computer system including storage private to said LPAR, storage private to said system and system functions, and storage shared by said LPAR and said system functions determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system. Writing said information to said shared storage, one of said system functions reading said information from said shared storage and reporting information indicative of an amount of usage of each of said

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applications to a billing function; and said billing function determining a bill for each of said applications based on the information obtained from said one system function.

83. However, Vessey teaches storage private to said LPAR, storage private to said system and system functions, and storage shared by said LPAR and said system functions (2218n, 2216a, 160, fig. 22; par. [0278], lines 1-11).

84. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath and Vessey because Vessey teaching of different type of storage private and shared would improve the system reliability by providing privilege access to those storage area thus preventing LPAR from accessing or altering system data.

85. The combined teaching of Heath and Vessey doesn't explicitly teach that determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system.

86. However, applicant admitted prior art (AAPA) in the original filed specification teaches determining an amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system (page 3, lines 21-25)

87. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath, Vessey and (AAPA) because (AAPA) teaching of determining an

amount of usage of applications in an LPAR and that the operating system executing in said LPAR is a guest operating system would improve Heath system monitoring performance by dividing the system to in LPARs and record closely and accurately application usage in each partition.

88. The combined teaching of Heath, Vessey and (AAPA) doesn't explicitly teach writing said information to said shared storage; one of said system functions reading said information from said shared storage; determining the total usage of all of said applications in said LPAR based on said information from said shared storage; another of said system functions determining an amount of usage of said LPAR based on system data, without using application usage information generated by said guest operating system; and comparing said total usage of all of said applications in said LPAR to said amount of usage of said LPAR to audit said amount of usage of said applications in said LPAR.

89. However, Smith teaches writing said information to said shared storage (pg. 182, lines 30-32), one of said system functions reading said information from said shared storage (pg. 182, lines 30-39); determining the total usage of all of said applications in said LPAR based on said information (pg. 27, lines 20-25) and another of said system functions determining an amount of usage of said LPAR based on system data, without using application usage information generated by said guest operating system (pg. 26, lines 20-33; pg. 27, lines 20-22).

90. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heath, Vessey, AAPA and Smith because Smith teaching of writing usage information to shared storage and determining an amount of usage of said LPAR based on system data, without using application usage information generated by said guest operating system r would improve system accuracy and efficiency since the billing is more accurate since application usage information is pulled directly from the private storage of the LPAR to the shared storage which prevent any alteration to the information and by having a system usage monitoring of each LPAR, it improve system efficiency and security for error proof usage billing.

91. The combined teaching of Heath, Vessey, AAPA and smith doesn't explicitly teach determining the total usage of all of said applications in said LPAR based on said information from said shared storage; and comparing said total usage of all of said applications in said LPAR to said amount of usage of said LPAR to audit said amount of usage of said applications in said LPAR.

92. However, It would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude that by summing each application usage, the total usage of all of said applications in said LPAR based on said information from said shared storage is obtained and it would have been obvious to compare said total usage of all of said applications to an amount of usage of said LPAR based on said system data, to charge based on said amount of usage of said applications which would improve system efficiency and accuracy by validating

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the accuracy of the measured amount of usage of all application against another metering maintained by the system to verify the accuracy of the calculated usage before initiating the billing.

93. As per claim 20, Heath, Vessey, AAPA and Smith doesn't explicitly teach determining said amount of usage of said LPAR based on said system data is performed by checking usage bits of processors which execute said LPAR. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude from Smith teaching of calculating hardware resource usage per application is done by checking usage bits of processors which execute said LPAR which would improve system accuracy of resource accounting used by all applications of said LPAR.

Conclusion

94. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(US 20020161717 A1) teaches Method and system for correlating job accounting information with software license information.

(US 20020095606 A1) teaches Method and apparatus for delivering software applications as services over the internet using a transaction-based utility model.

95. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAROLINE ARCOS whose telephone number is (571)270-3151.

The examiner can normally be reached on Monday-Thursday 7:00 AM to 5:30 PM.

96. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

97. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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